

Regional Water Planning in Texas

Introduction to the 5th Cycle

William Alfaro
Water Use, Projections, & Planning
Texas Water Development Board
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The following presentation is based upon professional research and analysis within the scope of the Texas Water Development Board's statutory responsibilities and priorities but, unless specifically noted, does not necessarily reflect official Board positions or decisions.

Overview

- ~~Background on regional and state water planning in Texas~~
- ~~Overview of regional water planning groups~~
- Fundamentals of water planning
- ~~Foundation of the State Water Plan~~

Fundamentals of Water Planning

Basic Planning Parameters

- Meet **drought of record** water needs
- 50-year planning horizon
- 5-year planning cycle
- 6 categories of water use: municipal, manufacturing, mining, irrigation, livestock, and steam-electric power
- Geographic breakdown of water user group information by county, river basin, and region

Planning Units & Key Terms

- **Drought of Record (DOR)** = period of time when historical records indicate that natural hydrological conditions would have provided the least amount of water supply
- Data is **decadal** (over 50 year period)
- Water volumes are in **acre-feet**
(1 acre-foot = 325,851 gallons)
- **Water User Group** = "WUG"
- **Wholesale Water Provider** = "WWP"
- **Major Water Provider** = "MWP"

Key Planning Terminology

Availability* = maximum amount of raw water that could be produced by a source during a repeat of the **DOR**

Existing Supply* = maximum amount of water that is physically and legally accessible for immediate use by a **WUG** under a repeat of **DOR** conditions

*See handout page 1: Section 6.1 from the 2017 State Water Plan

Key Planning Terminology

Demand = volume of water required to carry out the anticipated domestic, public, and/or economic activities of a **WUG** during drought conditions

Need = a potential water supply shortage, based on the difference between water demands and existing water supplies (can be met by implementing recommended water management strategies)

Unmet Need = the portion of an identified water need that is not met by recommended water management strategies

Key Planning Terminology

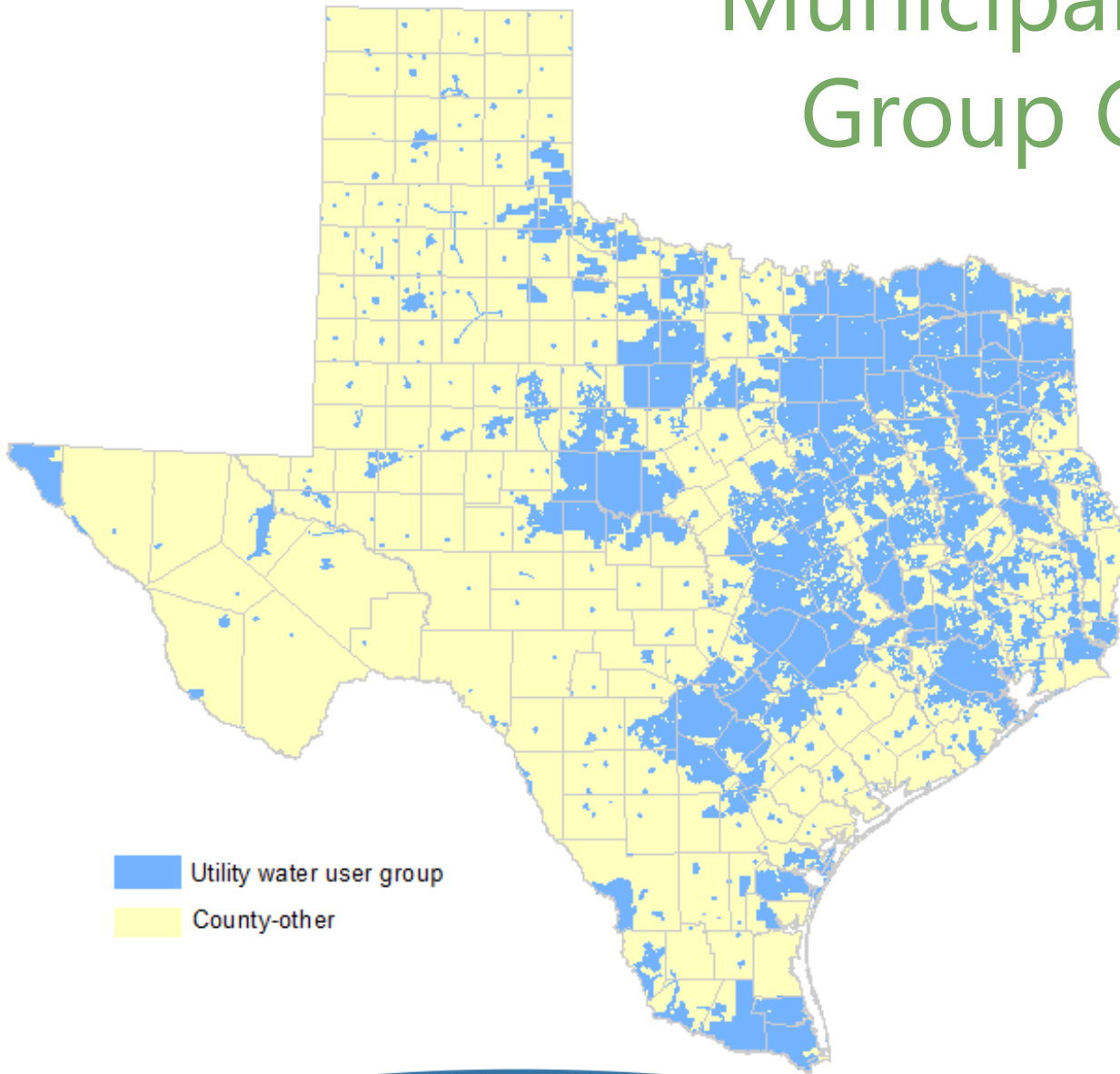
Water Management Strategy (WMS) = a plan to meet a need for additional water by a discrete **WUG**, through increasing total water supplies or maximizing existing supplies, including through reducing demands

Water Management Strategy Project (WMSP) = a water project that has a capital cost and when implemented, would develop, deliver, or treat additional water supplies or conserve water for **WUGs** or **WWPs**

WUGs in the 2016 Regional Water Plans

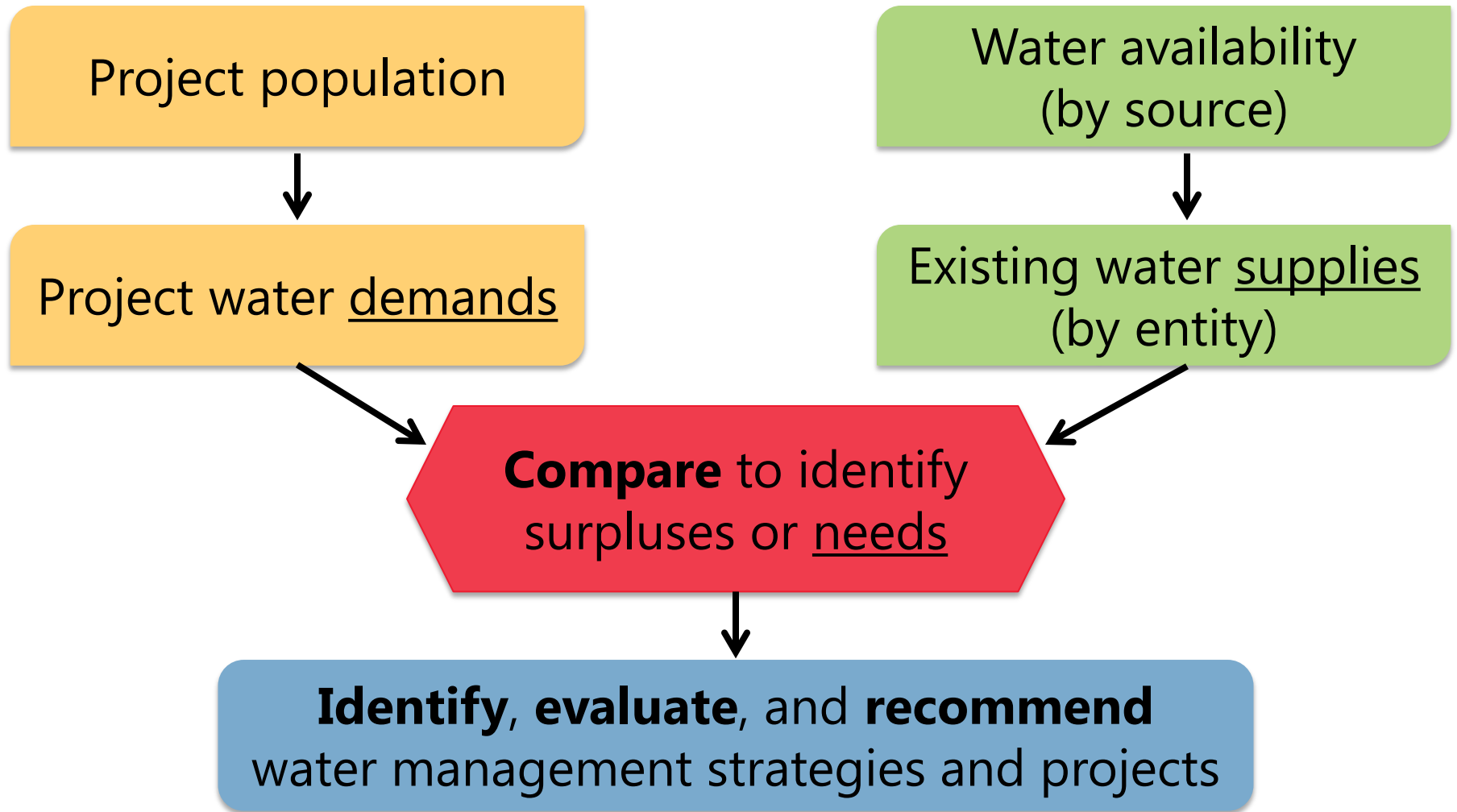
Demand Category	Number of WUGs
<i>Municipal WUGs</i>	
Cities & Utilities	1,364
County-Other	254
<i>Non-municipal WUGs</i>	
Manufacturing	183
Mining	228
Steam-Electric Power	85
Irrigation	241
Livestock	254
Total number of WUGs	2,609

Municipal Water User Group Categories



Utility water user group
County-other

Water Planning Basics



Path to Recommending Strategies and Associated Projects

- **identify** “potentially feasible” strategies and projects
- **evaluate** potentially feasible strategies and projects
- **compare** evaluated strategies and projects
- **recommend** strategies and projects that are “cost-effective and environmentally sensitive” 31 TAC 357.35(b)

Potentially Feasible Water Management Strategies*

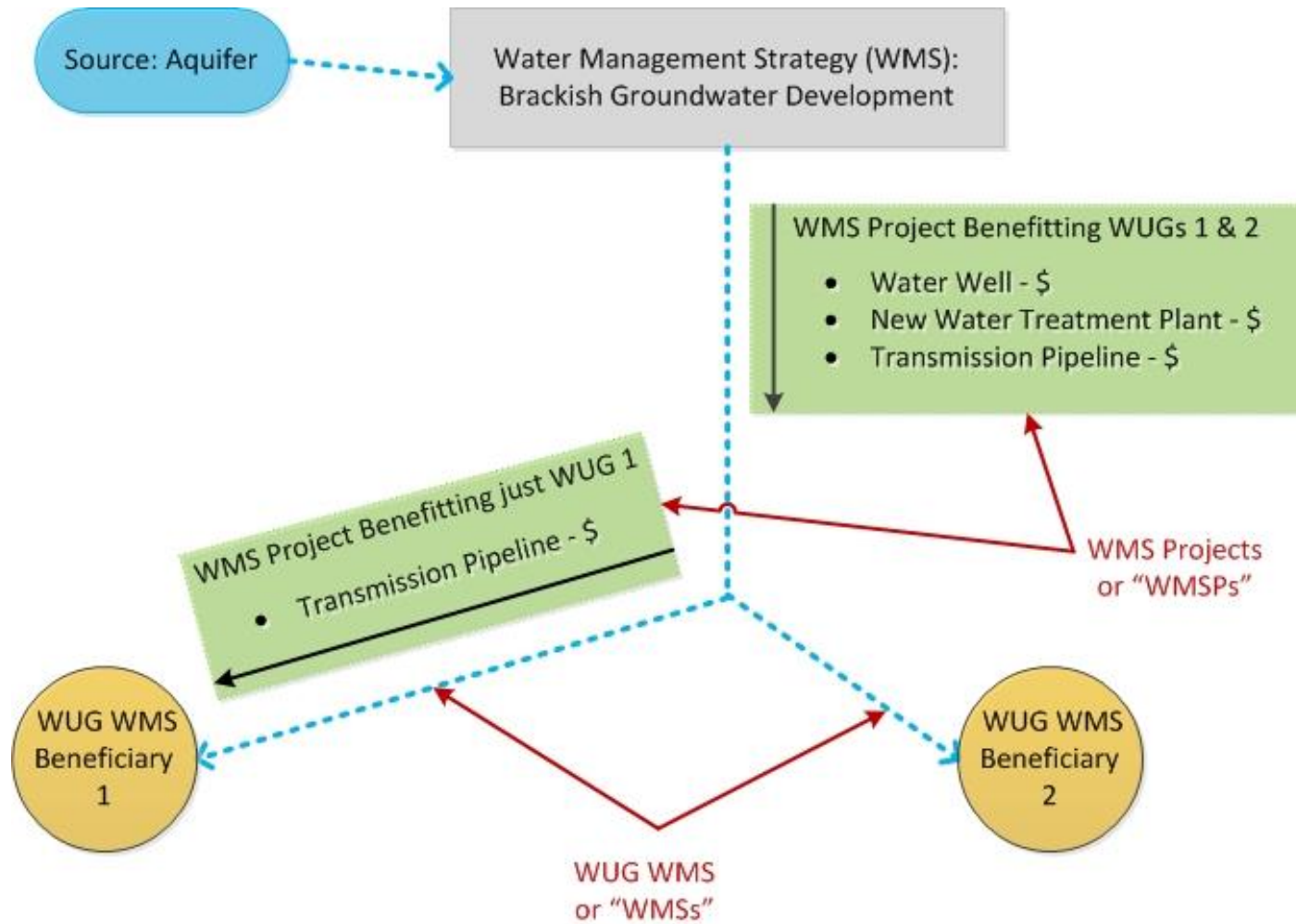
- WMS's that must be considered:
 - Expanded use of existing supplies
 - New supply development
 - Conservation and drought management measures
 - Reuse of wastewater
 - Interbasin transfers of surface water
 - Emergency transfers of surface water
- Water conservation and drought management measures must be considered for every water user group with an identified water need

*See handout page 2: List of potentially feasible WMSs required to be considered

Evaluation of Strategies and Associated Projects

- Evaluations are based on:
 - water quantity and reliability
 - financial costs
 - impacts to environment and agriculture
 - impacts to water quality
 - other factors such as regulatory requirements, time required to implement, etc.

Water Management Strategy vs. Project



Prioritization of Projects

- Regional and state level prioritization of WMSPs are required by SWIFT Legislation
- Each recommended WMSP must be prioritized
- Regional prioritization based on uniform standards developed by stakeholder committee (RWPG Chairs)
- State prioritization system based on statute and TWDB administrative rules

Regional Planning Deliverables

- Standard contract tasks associated with 11 Chapters
- Populate Online State Water Plan database (DB22)
- Report documents: Technical Memorandum, Initially Prepared Plan, and Final Plan
- List of prioritized projects

Standard RWP Chapters*

1. Planning area description
2. Population and water demand projections
3. Water supply analysis
4. Identification of water needs
5. Water management strategies and projects
6. Impacts of plan and consistency with protection of the State's water, agricultural, and natural resources

*See handout page 3: General Document Cross-Reference Table

Standard RWP Chapters (cont.)

7. Drought response information, activities, and recommendations
8. Unique stream segments, unique reservoir sites, and policy recommendations
9. Infrastructure financing analysis
10. Adoption of plan
11. Implementation and comparison to previous regional water plan

Questions?

William Alfaro
Water Use, Projections, & Planning
Texas Water Development Board
William.Alfaro@twdb.texas.gov